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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/852,927 | 05/10/2001 | Samuel D. Pritchett | TI-31004 | 5842 |
| 7590 | 04/08/2004 | | EXAMINER | |
| Ronald O. Neerings Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265 | | | LE, LANA N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2685 | |

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 09/852,927 | PRITCHETT ET AL. |
| Examiner | Art Unit | |
| Lana Le | 2685 | |

Office Action Summary

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 May 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 14-22 and 26-34 is/are allowed.

6) Claim(s) 1,9-13 and 23 is/are rejected.

7) Claim(s) 2-8,24 and 25 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

Claim Objections

1. Claims 31-32 are objected to because of the following informalities: they depend on claim 1 which does not disclose a frequency generator, they should depend on claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Sprigg et al (US 6,453,182).

Regarding claim 23, Sprigg et al discloses a method of controlling a transceiver section provided on a transceiver side 110 of a portable wireless communication terminal 200 that also includes a baseband side 106 coupled to the transceiver side (figs. 1&2), comprising:

receiving on the transceiver side 110 a signal from the baseband side requesting a desired transceiver operation (col 1, lines 49-54); and

in response to said requesting signal from the baseband side, signaling by 114 at least a portion of the transceiver section 110 to enter a powered-up state thereof and a powered-down state thereof in a desired sequence (col 1, lines 52-63; col 3, lines 5-7), including generating on the transceiver side signaling that produces the desired power-up/power-down sequence without requiring further signaling from the baseband side (col 1, lines 59-63; col 3, lines 5-7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sprigg et al (US 6,453,182) in view of Kohlschmidt (US 6,029,061).

Regarding claim 1, Sprigg et al discloses a transceiver apparatus for use in a portable wireless communication terminal 200 (fig. 1&2), comprising:

a transceiver section 110 for supporting wireless communication operations of the portable wireless communication terminal 200, including an input to which at least a portion of said transceiver section is responsive for entering either of a powered-down state and a powered-up state (col 2, lines 54-56);

a timing sequencer 114 coupled to a processor for signaling said transceiver section 110 to enter said powered-up and powered-down states in a desired sequence

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to perform a desired operation (col 1, lines 59-63), said timing sequencer 114 including an input for receiving from a baseband processor 106 a signal requesting the desired operation (col 1, lines 49-54);

 said timing sequencer 114 responsive to the baseband processor signal from 106 for signaling said desired power-up/ power-down sequence to said transceiver section without requiring further signaling from the baseband processor (col 1, lines 52-54, lines 59-63; col 3, lines 5-7).

 Sprigg didn't disclose a timing sequencer coupled to said input for signaling said transceiver section to enter said powered-up and powered-down states in a desired sequence to perform a desired operation. Kohlshmidt discloses a timing sequencer 103 coupled to said input of 106 for signaling said transceiver section (RF segment 106) (col 7, lines 39-42) to enter said powered-up and powered-down states in a desired sequence to perform a desired operation (col 5, line 34 - col 6, line 56; col 7, lines 1-42). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the timing sequencer sending a direct control signal to the RF section to shut down during the inactive periods of the terminal.

 Regarding claim 9, Sprigg et al and Kohlschmidt discloses the apparatus of claim 1, wherein Sprigg et al further discloses the apparatus including a selection apparatus 302 coupled between said timing sequencer 306 and said transceiver section input 216 for selecting one of said timing sequencer and the baseband processor 106 for connection to said transceiver section input (fig. 2&3).

Regarding claim 10, Sprigg et al and Kohlschmidt discloses wherein Sprigg et al further discloses the apparatus including a serial programming interface from 306 coupled to said selection apparatus for permitting the baseband processor to program the desired selection into said selection apparatus.

Regarding claim 11, Sprigg et al and Kohlschmidt discloses the apparatus of claim 1 wherein Kohlschmidt further discloses said timing sequencer includes a programmable state machine 103 (col 7, lines 5-42).

Regarding claim 12, Kohlschmidt further discloses the apparatus of claim 11, wherein discloses including a serial programming interface at signaling line INTR or Int1 or DBADB coupled to said programmable state machine for permitting the baseband processor 104 to program said programmable state machine.

Regarding claim 13, Sprigg et al and Kohlschmidt discloses the apparatus of claim 1 wherein Sprigg et al further discloses the apparatus is provided on a single integrated circuit 100.

Allowable Subject Matter

4. Claims 2-8 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, the cited prior art discloses the apparatus of claim 1, however they fail to further disclose the apparatus including a frequency generator coupled to said transceiver section for providing a frequency signal to said transceiver section, said timing sequencer coupled to said frequency generator for receiving therefrom information indicative of whether said frequency generator has achieved a locked state, said timing sequencer selectively responsive to said locked state information for signaling said transceiver section to enter said powered-up state.

Regarding claim 3 the cited prior art discloses the apparatus of claim 2, however they fail to further disclose the apparatus wherein said frequency generator has an input for receiving said baseband processor signal, said frequency generator responsive to said baseband processor signal for leaving a powered-down state thereof and entering a powered-up state thereof, said timing sequencer coupled to said frequency generator for signaling said frequency generator to leave said powered-up state thereof and enter said powered-down state thereof

Regarding claim 4, the cited prior art discloses the apparatus of claim 2, however they fail to further disclose the apparatus wherein said timing sequencer includes a lock delay timer coupled to said timing sequencer input and responsive to said baseband processor signal for tracking a delay time during which said frequency generator is expected to achieve said locked state, said timing sequencer further including a lock detector coupled to said lock delay timer and said frequency generator, said lock detector responsive to expiration of said delay time for detecting from said frequency generator locked state information whether said frequency generator has achieved said

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locked state, said lock detector responsive to detection of said locked state for signaling said transceiver section to enter said powered-up state.

Regarding claim 5, the cited prior art discloses the apparatus of claim 1, however they fail to further disclose the apparatus including a serial programming interface coupled to said lock delay timer for permitting the baseband processor to program said delay time into said lock delay timer.

Regarding claim 6, the cited prior art discloses the apparatus of claim 1, however they fail to further disclose the apparatus wherein said timing sequencer includes a transceiver timer coupled to said lock detector and responsive to detection of said locked state for tracking a further delay time associated with operation of said transceiver section, said transceiver timer responsive to expiration of said further delay time for signaling said transceiver section to enter said powered-down state.

Regarding claim 7, the cited prior art discloses the apparatus of claim 1, however they fail to further disclose the apparatus wherein said timing sequencer includes a transceiver timer responsive to said locked state information for tracking a delay time associated with operation of said transceiver section, said transceiver timer responsive to expiration of said delay time for signaling said transceiver section to enter said powered-down state.

Regarding claim 8, the cited prior art discloses the apparatus of claim 1, however they fail to further disclose the apparatus including a serial programming interface coupled to said transceiver timer for permitting the baseband processor to program said delay time into said transceiver timer.

Regarding claim 24, the cited prior art discloses the method of claim 23, however they fail to further disclose the method including enabling a frequency generator in response to said requesting signal from the baseband side, waiting for a first predetermined amount of time after enabling the frequency generator, and determining, after expiration of the first predetermined amount of time, whether the frequency generator has achieved a locked state.

Regarding claim 25, the cited prior art discloses the method of claim 24, however they fail to further disclose said generating step includes, in response to a determination that the frequency generator has achieved a locked state, generating a signal that drives the transceiver section into said powered-up state thereof, waiting for a second predetermined amount of time, and generating, after expiration of the second predetermined amount of time, a signal that places the transceiver section into said powered-down state thereof.

5. Claims 14-22 and 26-34 are allowable over the cited prior art.

6. The following is an examiner's statement of reasons for allowance:

Regarding claim 14, de Jager (US 4,074,199) discloses a transceiver apparatus for use in a portable wireless communication terminal (fig. 6), comprising:

a transmitter section 2 for supporting wireless communication operations of the portable wireless communication terminal;

a data source 1 having an output coupled to said transceiver section for providing thereto a frequency signal;

a plurality of registers 33 coupled to said frequency generator, an input for coupling to a summing circuit of the portable wireless communication terminal to receive therefrom a base band signal information.

However, the cited prior art fails to further disclose:

the baseband processor having a signal information indicative of a desired sequence of frequencies through which said frequency signal is to be shifted;
each of said registers for storing therein information indicative of a respective one of a plurality of frequencies to which said frequency signal is to be sequentially shifted;
and

said registers coupled to said input and responsive to said desired sequence information for providing their respective frequency information to said frequency generator sequentially according to said desired sequence.

Regarding claim 26, de Jager et al (US 4,074,199) discloses a method of controlling a frequency generator 1 provided on a transmitter side 2 of a portable wireless communication terminal that also includes a baseband side 36 coupled to the transmitter side (fig. 6).

However, the cited prior art fails to further disclose:

storing on the transceiver side information indicative of a plurality of frequencies to which a frequency signal output of the frequency generator is to be sequentially shifted; thereafter, receiving on the transceiver side from the baseband side information indicative of a desired sequence of frequencies through which said frequency signal is to be shifted; and

responsive to said desired sequence information, using the stored frequency information to shift said frequency signal through the desired sequence of frequencies.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836. The examiner can normally be reached on M-F.

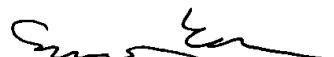
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lana Le

April 4, 2004



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